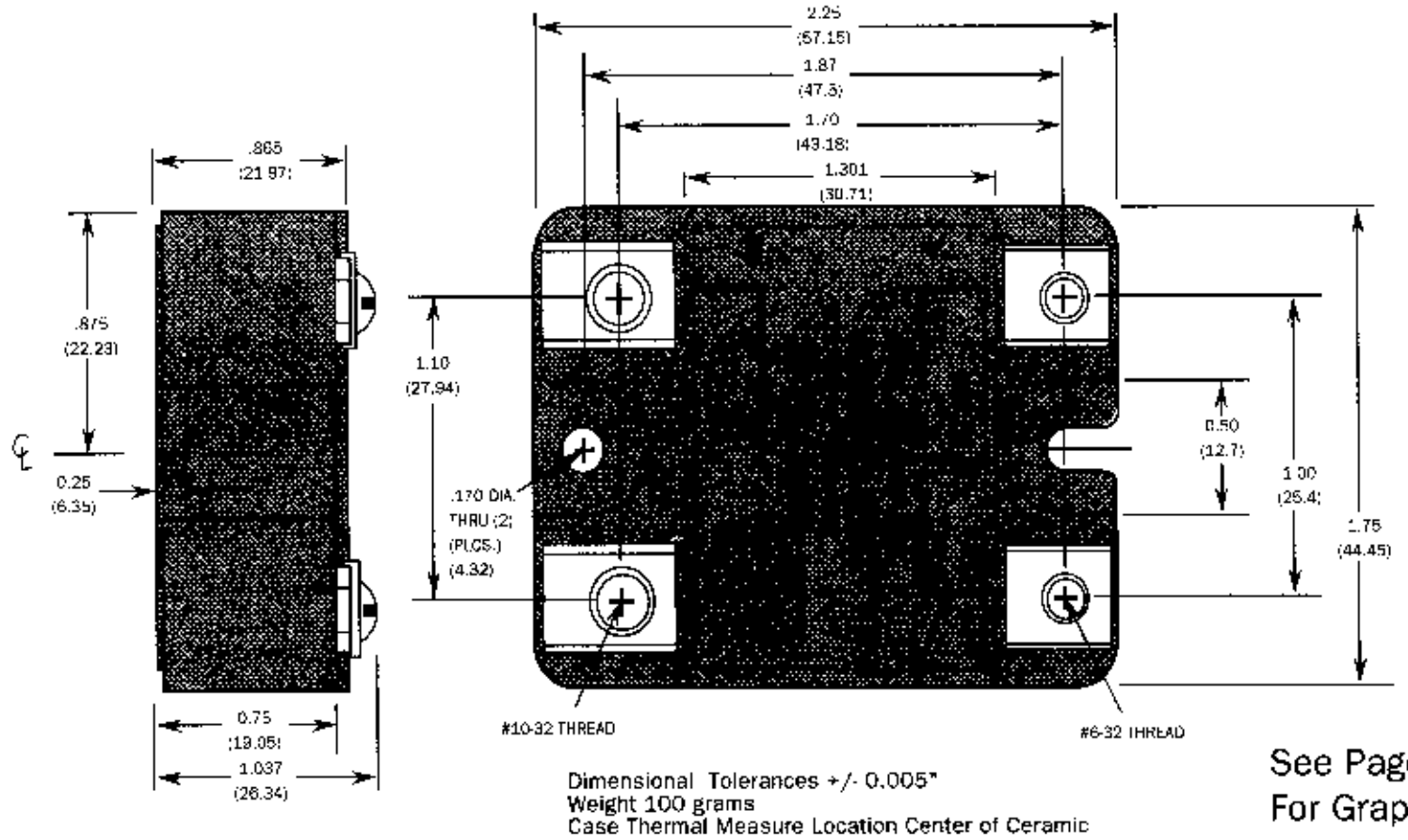
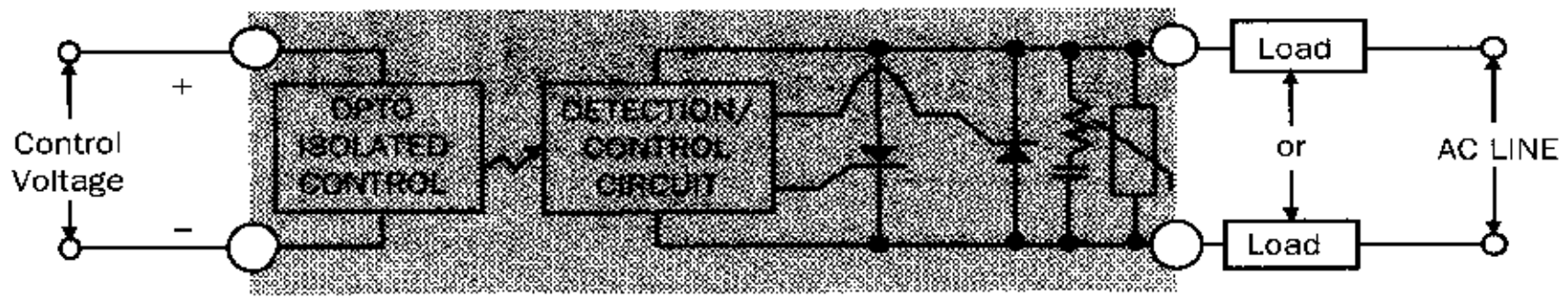
DIMENSIONAL DRAWING



Dimensional Tolerances +/- 0.005"
Weight 100 grams
Case Thermal Measure Location Center of Ceramic

See Pages 47 through 50
For Graphs

ELECTRICAL SCHEMATIC



Features

- Back to back SCR output for high dV/dt capability.
- Choice of zero and non-zero crossing units.
- Exposed ceramic baseplate for reduced thermal resistance and lower operating temperature.
- Low electrical resistance due to uninterrupted runs between the power terminals and the SCR's via FUSED COPPER™ leadframe.
- Floating screw type power terminals in a high temperature plastic housing for mechanical ruggedness.
- FUSED COPPER™ construction yields superior thermal impedance and power cycling capabilities.
- Integrated drive circuitry.
- UL & CSA recognized.
- Designed to comply with V.D.E. requirements.

General Description

Gentron's AC Solid State Relays are designed for controlling large amounts of power with a low level DC Logic Input Signal. They incorporate a dual SCR design to provide full wave capability with high dV/dt capability. Zero Crossing Drive Circuitry switches on minimizing the effects of inductive loads. Non-Zero Crossing Drive Circuitry allows for phase control capability as well as on/off control. The opto-coupler provides the interface to the logic level DC input signal and electrical input/output isolation. Superior performance, quality and reliability are insured by the use of Gentron's FUSED COPPER™ process. To help ensure the maximum of transient protection an internal MOV (Metal Oxide Varistor) and a resistor-capacitor network is included in each device.

Typical Applications

- On/Off and phase control of high power AC equipment.
- Interfacing of microprocessor controls to AC loads - lights, motors, heaters, valves, solenoids, etc.
- Electro-mechanical line contactor replacement.
- Industrial and process controls.
- Programmable controller interface.
- Robotic motor position and speed controls.
- Light dimmers.
- Transformer tap switch.
- Phase Proportional Drives.

Options

- Soft Start
- Current Limit
- Thermal Limit
- Energy Saver
- Proportional Control
- LED on Indicator
- Breakers see page 132

TYPE	DC INPUT ZERO CROSS SWITCHING		DC INPUT NON–ZERO CROSS SWITCHING		AC INPUT ZERO CROSS SWITCHING	
NOMINAL LINE VOLTAGE – VAC	240	480	240	480	240	480
MODEL NUMBER	SSR 600 240 D55	SSR 1200 480 D55	SSR 600 240 R55	SSR 1200 480 R55	SSR 600 240 A55	SSR 1200 480 A55

INPUT SPECIFICATIONS

MAX. INPUT CURRENT	15 mA @ 5VDC		15 mA @ 90VAC
MAX. INPUT VOLTAGE – VDC	32	26	(VAC) 280
MIN. INPUT VOLTAGE – VDC	3	3.5	(VAC) 90
MIN. TURN-OFF CURRENT – mA DC	0.25		2.5 mA (AC)
MIN. TURN-OFF VOLTAGE – VDC	1	1	(VAC) 10
MAX. TURN-ON TIME - mS	8.3	0.02	8.3
MAX. TURN-OFF TIME - mS	8.3		
MAX. REVERSE VOLTAGE – VDC	-32	-32	N/A
MAX. INPUT TO OUTPUT CAPACITANCE - pF	10		
MAX. ELECTRICAL ISOLATION - VRMS (INPUT TO LOAD TERMINALS)	4000		

OUTPUT CHARACTERISTICS

MIN. LINE VOLTAGE – VAC	24	48	24	48	24	48
MAX. LINE VOLTAGE – VAC	330	530	330	530	330	530
MAX. TRANSIENT OVERVOLTAGE– VAC PEAK	600	1200	600	1200	600	1200
MIN. LOAD CURRENT @ 85 °C - A	0.05					
MAX. LOAD CURRENT @ 85 °C - A	55					
MAX. ON-STATE VOLTAGE DROP @ MAX RATED CURRENT - V	1.4					
MAX. OFF-STATE LEAKAGE CURRENT @ 25 °C - mA	5					
MAX. SINGLE-CYCLE SURGE CURRENT (16.7 mSEC NON-REPETITIVE @ 85 °C) - A	600					
MAX. FUSING I(2)T VALUE (8.3 mSEC) - A(2) SEC	3000					
MAX. dV/dt CAPABILITY (T(C)=85 °C) - V/µSEC	500					
MIN. OPERATING FREQUENCY - Hz	47					
MAX. OPERATING FREQUENCY - Hz	400					
MAX. POWER DISSIPATION (T(C)=85 °C) - W	110					
MAX. THERMAL RESISTANCE, JUNCTION-TO-CASE (JC) - °C/W	0.35					
MAX. ELECTRICAL ISOLATION (ALL TERMINALS TO HEATSINK) = VRMS FOR 1 MIN WITH UNIT MOUNTED PROPERLY - V	4000					
MIN. OPERATING TEMPERATURE - °C	-25					
MAX. OPERATING TEMPERATURE - °C	125					
MIN. STORAGE TEMPERATURE - °C	-40					
MAX. STORAGE TEMPERATURE - °C	125					
POWER FACTOR RANGE	0.5-1.0					